

EVALUATING THE EFFECTIVENESS OF PUBLIC EDUCATION PROGRAMS

Evaluating the Effectiveness of Public Education

Programs for the Citizens of Onalaska

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: _____

Abstract

In 2008, fires in the United States accounted for 3,320 deaths and 16,705 injuries. These statistics were reported by the National Fire Protection Association (NFPA) 2009. Implementing successful public education programs can greatly reduce these statistics in our country. The problem is the Onalaska Fire Department (OFD) does not have a system to evaluate the reduction of incidents as a result of its public education efforts. The purpose of this research was to identify methods to evaluate the effectiveness of presenting public education programs to the citizens of Onalaska. A descriptive research method was used to answer the following research questions: a) What public education programs are currently being taught by fire departments; b) What are the challenges fire departments comparable to OFD experience in the delivery of public education programs; c) What local or national programs exist to measure the effectiveness of public education programs; d) What are the essential components to effectively evaluate public education programs for OFD.

The procedures used for this research included collecting and reviewing data at local and national levels to provide the foundation to support the organizational problem that OFD is facing. A survey instrument was developed and distributed for the purpose of collecting data from departments comparable to OFD. A second survey instrument was distributed to the National Society of Executive Fire Officers (NSEFO) to broaden the response from localized to a national level.

The results from this research identified the need to implement an evaluation process for all public education programs. Recommendations included an evaluation process to comprise of: 1) pre-testing and post-testing component; 2) reviewing education programs that have incorporated an evaluation process into their program; and 3) utilization of technology to track data pertaining to risk reduction for the citizens of Onalaska.

Table of Contents

Certification Statement.....	2
Abstract.....	3
Table of Contents.....	4
Introduction.....	5
Background and Significance.....	5
Literature Review.....	8
Procedures.....	18
Results.....	20
Discussion.....	27
Recommendations.....	30
Reference List	32
Appendix A	34
Appendix B	35
Appendix C... ..	38
Appendix D... ..	40
Appendix E	47
Appendix F	50

Introduction

According to the National Fire Protection Association (NFPA, 2009), fires in the United States accounted for 3,320 deaths and 16,705 injuries in 2008. According to a news release by NFPA, 92% of fire deaths reported in structures occurred in the home. From 2003 – 2007, smoking materials and heating equipment were listed as the two leading causes of fires deaths and fires in homes (NFPA, 2010). Implementing successful public education programs can greatly reduce these statistics in our country.

The problem is the Onalaska Fire Department (OFD) does not have a system to evaluate the reduction of incidents as a result of its public education efforts. The purpose of this research is to identify methods to evaluate the effectiveness of presenting public education programs to the citizens of Onalaska. A descriptive research method will be used for this project. The research approach will include collecting and reviewing data at local and national levels to adequately answer the following research questions:

- 1) What public education programs are currently being taught by fire departments comparable to OFD pertaining to risk reduction?
- 2) What are the challenges fire departments comparable to OFD experience in the delivery of public education programs?
- 3) What local or national programs exist to measure the effectiveness of public education programs?
- 4) What are the essential components to effectively evaluate public education programs for OFD?

Background & Significance

The Onalaska Fire Department (OFD) is a combination department with 36 active members. The organizational structure includes a Fulltime Fire Chief and Assistant Chief / Fire Inspector, and

nine fulltime firefighters to support coverage 24-hours a day seven days a week with a minimum staffing of two Firefighter / EMTs per 24-hour shift. The remainder of the personnel includes 25 Paid on Call (POC) firefighters and a seasonal Public Educator that works up to 500 hours annually. OFD provides services for approximately 22,000 people in a 27.5 square mile area and responds to 1,400 fire and emergency medical service (EMS) non- transport calls annually. The department is also responsible for conducting over 1800 fire prevention inspections annually.

For the past 17 years, OFD has been very proactive in developing creative ways to educate children about fire safety. Performing fire safety presentations in front of hundreds of children or talking to a group about risk reduction requires dedication and a unique set of skills. Very often it is difficult to find firefighters that are willing or have the time to help out. This responsibility has been carried primarily by the Assistant Chief and the public educator for the past 17 years.

OFD programs include annual visits or station tours and fire safety presentations for pre-school and daycare centers in the community. Kindergarten through third graders are bussed (paid by school district) to OFD for a fire safety puppet and clown show, followed by a station tour during national Fire Prevention Week (FPW), scheduled each year during the week of October ninth. Each show follows the current FPW theme and is written new each year by the public educator. The fourth graders receive a visit from the fire safety house that OFD contracts from a neighboring department, and provides instruction on practicing Exit Drills in the Home (EDITH). In addition OFD provides quarterly blood pressure checks and fire and fall prevention programs to all senior citizen assisted living apartments in Onalaska. Additional programs include; CPR classes, fire extinguisher training, safety day events, FPW open house / safety expo, and other events requested by the public. With limited time and staffing, it is essential for OFD to evaluate the current programs and presentation methods. This process will allow OFD to

measure the value of these efforts, and quantify the funding allocated to prevention and public education.

In year two of the Executive Fire Officer Program, the students are introduced to a course titled; Executive Analysis of Community Risk Reduction (EACRR). This course takes the chief officers focus from an emergency response (reactive) approach to a proactive (prevention) approach. During the two weeks at the National Fire Academy's (NFA) EACRR course, the author recognized that OFD has demonstrated its dedication to public education and prevention, but does not have a system in place to evaluate the value or knowledge gained from these programs. For the past 17 years the author has been working diligently to keep the city of Onalaska safe from fires and other emergencies, but has done this without proper data or any type of evaluation method.

EACRR introduces the students to the Community Risk Reduction Model (NFA, 2009, p. SM 1-8). The five steps in this model include: 1) Getting Ready; 2) Assessing Community Risk Reduction; 3) Intervention Strategies; 4) Action; and 5) Evaluating. The final step is to evaluate the results, report the results, and modify the risk reduction initiatives. It was at that step when the author realized the importance of having a system to evaluate all programs presented to the citizens of Onalaska. By implementing an evaluation process, OFD will be able to measure the knowledge gained, which will either support or identify the need for changes to existing programs.

The goal of this research paper is to provide recommendations based on data collected so OFD can implement a system or process to evaluate its public education programs. As the City of Onalaska continues to grow, the demand for community risk reductions programs will increase. This growth may be positive for the city but it will be taxing on the fire service without proper staffing. The importance of this research is for OFD to become more aware of the need to

increase efficiency with its limited staffing, funding, and resources, in order to provide effective educational programs that are designed to reduce risk or injury within the community. The data collected will not only support changes or a need for new programs, but will also provide statistics that may be used during tough budget times to support future educational programs. Simply stating that OFD provides fire safety education programs to our community may not justify the need to support current or additional funding for programs and staffing.

This Applied Research Paper (ARP) for the EACRR course is linked to the enabling objective “Develop a strategy for leading change as part of a community risk reduction initiative” (NFA, 2009, p. SM 4.1). The ARP will identify key components that will be put into a plan that will enable OFD to evaluate current programs, implement future community risk reduction programs, and be able to measure their effectiveness.

This research paper also relates to and supports all five of the United States Fire Administrations (USFA) operational objectives, but more specifically to “Reduce the loss of life from fire in the age group 14 years old and below” and “Reduce loss of life from fire in the age group of 65 years old and above” (NFA, 2008, p. II-2). By implementing a system to evaluate current programs, OFD will have data to support changes or the implementation of newer programs aimed at protecting the community’s children and senior citizens.

Literature Review

The literature review for this ARP identifies and supports the organizational problem that OFD is currently facing. Extensive research has been conducted on the fire problem the United States is currently facing and the impact effective fire and life safety education programs can play in reducing loss of life and injury. USFA (2009) issued a report on the fire problem in the United States. The report estimated in 1974 there were 12,000 fire deaths. This was also the year that the USFA was established, and a goal was set to reduce fire deaths by half within the next

generation. Fire deaths in 2006 were estimated by National Fire Protection Association (NFPA) to be at their lowest level (3,245). Although this is a significant reduction in fire deaths since 1974, the U.S. is still ranked as having the fifth highest fire death rate out of 25 industrialized nations (USFA, 2009).

According to NFPA (2009), 1,451,500 fires were responded to in 2008. These fires resulted in 16,705 injuries and 3,320 fire deaths. Residential home fires caused 83 % of the fire deaths. It was also reported that 79 % of the civilian injuries were caused in the home. Cooking fires continue to be the leading cause of fires in the home and fire injuries. Half of the reported injuries were caused while the people were trying to extinguish the fire. Careless use of smoking materials is the leading killer of civilians in the home. Heating equipment, electrical, and candle fires were ranked as the top three causes of home fires. National fire statistics could drastically be reduced if the fire service implemented effective public education programs to target these specific types of fires.

Byrne (2010) believes the culture of the fire service is changing. The leaders of the fire service are now mandating their personnel to conduct company fire inspections and public education programs. This is being met with some resistance as the older and some of the new generations of firefighters feel that they were hired to fight fires and not be involved in prevention, education, and EMS services. NFPA reported that firefighter fatalities are down 60% and firefighter injuries have been reduced by 78% since 1978 (Byrne, 2010). This reduction in firefighter fatalities can be credited to the efforts of risk reduction programs. Firefighters are healthier and living longer because they are being exposed to fewer fires and have seen a significant improvement in the protective gear today versus 30 years ago. A reduction of 46% in civilian fire deaths since the 1970s can also be attributed to the increase in delivering of fire safety programs to the public. Byrne feels that this new generation of firefighters performing

prevention and public education is not destroying the culture of the fire service but is bringing added value to the community. To prevent from becoming extinct, fire departments must have the ability to adapt and reinvent themselves to support the needs of their customers. The fire service must fit into society and champion quality prevention and education programs to keep their firefighters and communities safe. According to Byrne (2010), risk reduction is change, which can be uncomfortable but it is the right thing to do, and it is what the customer wants. This change can only help support the fire service as we bring added value through prevention and education in addition to emergency response. Firefighters can be assured that there will always be fires to fight; risk reduction programs are a valuable extension of the services provided to our customers.

Dominos Pizza (2009) issued a press release on their 50 year anniversary; they celebrated by introducing their reinvented pizzas. Marketing Officer Russell Weiner stated they created a new pizza to reflect the demands of their customer. The new pizza recipe has been in the development stage for the past 18 months. According to the report, Dominos was very happy with their pizzas but knew as times change, the customer's tastes change as well. This announcement was noted as one of the most aggressive promotions in the company's history. The decision to change the recipe came after evaluating feedback from thousands of consumers.

According to USA Today (2009), a survey was conducted in 2009 of consumers taste preferences and the results left Dominos Pizza tied for last place of the national chains surveyed. These results along with customer feedback have prompted the change which entailed testing a variety of cheeses, sauces, and crusts over a two year period. Dominos turned 50 in 2010 and planned to introduce their new pizzas just weeks before Super Bowl Sunday. Dominos conducted a follow up for feedback on the new pizzas with the food bloggers that criticized their product in the past.

Crawford (2010) recognizes the important role the public educator will play as leaders in the future of the fire service. Crawford feels there is a direct relationship between public education and emergency response. Early notification through the 911 system is critical in reducing burn times and enabling the fire department to achieve an effective emergency response. This can be accomplished by educating the public on prevention and early detection systems. According to Crawford (2010), public educators work with heart and passion and are use to doing a lot with very little. Unfortunately when the economy is tight, they are predominantly the first to be cut. Crawford feels the public educator's energy and leadership is an important part of the future of the fire service. Chief Officers will need to recognize the value and acknowledge the import role the public educator plays as an indispensable tier in the future of the fire service.

NFPA 1035 Standard for *Professional Qualifications for Public Fire and Life Safety*

Educator (2005) establishes the Job Performance Requirements (JPRs) for public educators.

Chapter 5 identifies requirements for the Public Fire and Life Safety Educator I.

- Section 5.3 is planning and development which gives information on forming partnerships to identify current life safety issues in the community and available resources.
- Section 5.4 lists educational and implementation requirements to include lesson plans, appropriate materials for audience, and presentation methods.
- Section 5.5 (Evaluation), discusses the administration of an evaluation instrument to measure the outcome of the program.

Chapter 6 has the JPRs for Public Fire and Life Safety Educator II. This section is for the advanced public educator and requires this individual to design and manage the risk reduction programs for their community. Requirements include knowledge in the budgetary process to support programs based on local risk in the community.

- Section 6.3 is planning and development which requires establishing risk reduction priorities based on local data and implementing programs to address these issues.
- Section 6.4 (Education) requires informational materials to be developed given a local life safety objectives for a target audience.
- Section 6.5 is evaluation which requires developing an evaluation strategy based on program goals so they can be measured.

The requirements listed in the JPRs of NFPA 1035 clearly identify professional requirements that a public educator shall follow. This standard specifically identifies having knowledge in planning and development, education, and implementation of an evaluation instrument to measure the program outcomes.

The USFA (1991) produced a short guide for public educators to use to evaluate their fire education programs. This guide gives three specific reasons for evaluating the effectiveness of public education programs (p.1).

- To determine if the program is worth repeating in the community or elsewhere
- To elicit feedback on how to improve the program
- To provide a rationale for financial support of public fire education programs

The USFA and Arson Control developed this guide as a tool for the fire service to evaluate their programs. Reaching and motivating the target audience to practice fire prevention is the primary goal of this evaluation process. From both financial and loss prevention aspect it is important to know if a program reduced fire deaths, injuries, and or dollar loss.

According to USFA (1991), public education programs are measured by their change in behavior. The guide stresses the importance of reaching the majority of the target audience that the program was designed for. Measuring knowledge by pre-testing and post-testing is an effective way to know if a program is successful. The guide recommends testing weeks, months,

or even a year to see if the knowledge was retained from a program. Implementing a sample citizen survey that contains a few critical questions before and after a public education program is a quick way to measure the results of a program.

According to USFA (1991), fire departments should have data from their incident reporting system that will show the types of fires, deaths and injuries, as well as financial losses annually. The fire department should compare and track data each year to determine decreases that can be attributed to a specific program. The guide recommends also comparing local data to neighboring communities that may not have a program to see if they are experiencing increases or decreases in incidents related to a specific program.

Anecdotes are another tool for the fire service because they provide a testimony that a specific program has made an impact in someone's life by preventing death or injury (USFA, 1991). By using statistics and several real life stories, the fire department can show the public the value of a successful risk reduction program.

McClintock, Thompson (2000) co authored *Demonstrating Your Programs Worth* to show program managers how they can demonstrate the value of their work to the public, peers, funding agencies, and the people they serve. Evaluation is the key to demonstrating the success or failure of any program. If a program is not producing the desired results (risk reduction), the evaluation process can identify what changes need to be made to the program so it will be successful. As an example, evaluation may identify that the presentation delivery method was not effective for reaching its target audience. "The earlier evaluation begins, the fewer mistakes are made; the fewer mistakes made, the greater the likelihood of success" (p.2). A final assessment is used following the delivery to determine if the program met its goals. Proper evaluation methods will produce information that is not only beneficial to the manager but other risk reduction programs. Programs that produce successful results are more likely to receive

funding and support than those that do not. A very important side benefit to evaluation is it gives the customer the opportunity to provide valuable feedback. Evaluation in the workplace can boost employee morale as they know their manager acknowledges their work is paying off, or they are taking steps to assure improvements are being made. Good evaluation will provide the manager with results and data that can be used with the media or in professional journals to promote the department or organizations efforts.

According to McClintock, Thompson (2000), there are four stages of evaluation: formative, process, impact, and outcome.

- Formative evaluation “ensures that program materials, strategies, and activities are of the highest possible quality” (p. 25). This stage in evaluation is done early in the development stages of a program. It is also used when a program is being modified, having problems, or when it is being adapted for a different population. There is a list of questions that the formative evaluator needs to be concerned with. One question in particular stresses the importance of assuring that staff members are comfortable with their role in the program. The delivery of a program is a key component to its success. If staff members are not comfortable with the program it will more than likely fail to meet its goals. Staff training, resources, and scheduling are important considerations as well. The evaluator also has to look at barriers to prevent resistance from the target population. Formative will also look at problems after a program has been presented. The qualitative method such as personal interviews will allow the participant to express their ideas and concerns regarding the program. The evaluator can use this information to address concerns that may affect the success of the program. Qualitative surveys are simply a means to gather data on the level of consumer satisfaction of the program. The formative process is dynamic and should be continuously used throughout the life of the program.

- Process evaluation “is the mechanism for testing whether the program’s procedures for reaching the target population are working as planned” (p. 27). The purpose is to count the number of people the program is reaching, how many of these people are the target population, and how many of the target population are not being reached. Forms must be designed so they can be used as soon as the program has been implemented. The evaluator must determine if the program will be evaluated by counting each person the program contacts in the target population, or count each time a person has contact with the program regardless of how many times they participated or viewed the program. This is important as an individual may benefit or increase knowledge or behavior each time they have contact with the program. Forms must be designed to track the number of contacts the program had and items that were distributed or collected. The results of process evaluation can be used to show funding agencies the amount of activity this program received.
- Impact evaluation provides information about the changes in the target audiences “knowledge, attitudes, and beliefs that may lead to changes in injury-prevention behavior” (p. 29). This stage of evaluation is used to measure baseline knowledge, attitudes, and beliefs before the audience is exposed to the program. It is used again to measure the knowledge, attitudes, and beliefs immediately after the program. Survey instruments such as questionnaires are almost always used to measure knowledge, attitudes, and beliefs. By comparing the two measurements, you can determine what areas of the program need to be changed to assure the program meets its goals. Positive results of impact evaluation can be used to justify funding for continuing your program. Funding a program that received negative results would be difficult unless you can show that the results clearly identified modifications that would make the program a success.

- Outcome evaluation is the most important stage because it measures if your program met its goals of reducing death, injury, or loss of property. Although outcome is similar to impact evaluation, outcome measures the changes in prevention behaviors, death, and injuries. It is critical for baseline data to be collected before the program is presented so the results of the outcome evaluation can be accurately measured. Outcome evaluations can be conducted yearly or every three years to verify if the knowledge is being sustained. Results of this stage in evaluation will produce strong evidence that will support funding your program in the future.

According to McClintock, Thompson (2000), there are two methods of evaluation.

- Qualitative methods are valuable in the formative stage of evaluation. Feelings, beliefs, and impressions are evaluated using qualitative methods which allow the evaluator to see the preferences of items included in the program. This knowledge allows program staff to make the recommended adjustments to the program to prevent problems once it has been implemented. Personal interviews, focus groups, and participant observations are commonly used in qualitative methods. With personal interviews, the evaluator is able to review the transcript and provide the program manager with feedback that can be beneficial to the development or improvement of the program. Focus groups are similar to personal interviews. The main difference is the questions are directed at a group of four to eight instead of one person. It is recommended that the discussions be audio taped and transcribed so the evaluator can analyze the data and provide a report to the program manager. Participant observation involves the evaluation team to participate in the program being observed. This method requires the evaluator to observe the flow of the program from a participant's perspective. The evaluator will be able to record areas of

success and weakness in the program. The disadvantage of this method is it is time consuming for the evaluators.

- Quantitative methods are used during process, impact, and outcome evaluation. This method involves analyzing data on number of participants in program and percentage of behavioral change. These results can be used to draw a conclusion about the target audience from the program. A counting system needs to be established to measure the number of participant in the target population. A survey is a good method for collecting information and can be expressed in a numerical form. Survey instruments are used in quantitative methods to collect information. This is a valuable tool to identify pros and cons of a program. Components such as the delivery method, ability to follow instructions, or not being able to understand the information can be collected and analyzed with a survey. Surveys can provide baseline data on knowledge gained which produced a change in behavior such as wearing a seat belt.

NFPA (1991) published *Learn Not to Burn*, a series of resource books for pre-school and elementary grade students. Each book contains classroom activities, evaluation instruments, family activities, student activity sheets, and a knowledge test. This program is designed to be easily integrated into the classroom. The author reviewed grade two of the series. To get started, a committee must be established to oversee the program. It is recommended that the fire service, principal, and parents get involved in supporting this program. In the beginning of the program, the students are given a knowledge test to help evaluate the needs of the class. There are ten fire safety behaviors that are taught using classroom activities, family activities, and inviting the fire department to visit the classroom. After addressing all behaviors, the students are given the knowledge test again. A test summary sheet is provided to track the results and measure knowledge gained from the program.

In summary, the literature review supports the need for the OFD to implement an evaluation process for its public education programs. Prevention and education are going to be critical in the future of the fire service. The public's demand for risk reduction programs are going to continue to increase (Byrne, 2010). With limited staffing, the fire service will need to reinvent itself to meet these demands. By implementing an evaluation process, the fire service will be able to collect and review data to measure if a program is meeting its goals (USFA, 1991). This process will also assure when the program is being presented that the staff member's time will be spent wisely. Programs such as the Learn Not to Burn curriculum allow the fire service to form partnerships within the schools to utilize teachers as experts in education to be instructors of the program. This partnership is an efficient way to implement fire safety education into the schools. The fire service is an intricate part of the process and must be available to visit the class rooms and reinforce fire safety lessons when the teachers request them. These types of programs taught by expert teachers is a great tool to reduce the amount of time firefighters have to spend on fire safety education programs, and insure that a nationally accepted curriculum is being utilized.

Procedures

The focus of this ARP was on the following four research questions: a) What public education programs are currently being taught by fire departments comparable to OFD pertaining to risk reduction? b) What are the challenges fire departments comparable to OFD experience in the delivery of public education programs? c) What local or national programs exist to measure the effectiveness of public education programs? d) What are the essential components to effectively evaluate public education programs for OFD?

The procedures for this ARP began during the EACRR class at the NFA. During that two week period, the author was able to network with other chief officers and exchange information regarding specific problems within their organizations. The Learning Resource Center (LRC)

provided the author the opportunity to extensively research the topic of fire safety education and evaluating public education programs. The author was able to review and copy articles from numerous professional journals at the national and state level. The LRC also allowed the opportunity to check out books and ARPs while on campus. With over 18,000 books in the LRC, the author had the opportunity to check out and conduct research during the two week course at the NFA.

A feedback instrument, (questionnaire) was utilized to collect data from departments comparable to OFD. The author selected 19 departments that were comparable to OFD in size and staffing from a spread sheet that lists fire departments in the state of Wisconsin. This list is provided by the Safety and Buildings Division and can be located on the Wisconsin Department of Commerce web site (<http://commerce.wi.gov/SB/SB-FirePrevention-FireDepartments.html>). The author distributed two additional questionnaires to public education professionals based on their reputation for creating and presenting successful public education programs. A cover sheet was included to briefly explain the ARP, and reasons for the questionnaire (see Appendices A and B). A mailing list was created for the 21 departments surveyed (see Appendix C).

Survey Monkey, a web site based data collection tool was utilized by the author to transfer information and create tables to analyze data collected from the first survey (see Appendix D). A second survey was created using Survey Monkey and distributed through an e-mail tree to the National Society of Executive Fire Officers (NSEFO). The reason for this survey was to provide the author with baseline data on a broader or national perspective (see Appendices E and F).

Limitations for the research were discovered when the sample survey returned 10 of the 21 mailed. The author believed the 48% return rate may have been because of the evaluation component of the questionnaire. In addition, departments similar to OFD with limited staffing may only have the resources to provide limited fire safety education on an annual basis. The

author distributed a second feedback instrument on a national level to get a broader view of what departments regardless of size were implementing to evaluate public education programs. The author received 48 responses out of 518 (9.3%) on the national level from an e-mail tree through the NSEFO. After analyzing the responses from both surveys, the author made the assumption that the feedback provided was accurate and factual based on the respondents knowledge of their public education programs within their organizations.

Definition of Terms:

Combination Fire Department – A fire department made up of a mix between fulltime and paid on call firefighters.

Fulltime Firefighter – Salaried firefighter assigned to one of three shifts to provide 24-hour a day coverage for services. Sample work schedule: 24-hours on, 48 off.

Paid on Call Firefighter - The paid on call firefighters (POC) are paid when they respond for emergencies and training.

Results

The research for this ARP provided the author with a significant amount of data to be used to answer the four research questions.

The first research question asked, what public education programs are currently being taught by fire departments comparable to OFD pertaining to risk reduction?

Sample Survey Results of Comparable Departments:

Answer Options	Response Percent	Response Count
Daycares	90.0%	9
Elementary school k-5	100.0%	10
Senior Citizens.	90.0%	9
<i>answered question</i>		10
<i>skipped question</i>		0

The results of the survey indicated that 90% of the fire departments surveyed delivered fire safety education programs to the high risk group of daycares and senior citizens. Based on the survey the target audience for public education programs was elementary school grades K-5 with 100% of the departments presenting to this risk group. The programs most commonly used by the departments surveyed were: NFPA- Risk Watch and Learn Not to Burn; National Fire Council - Fire Pup Program; and Rainbow Valley Fire Education series.

The data collected from the NSEFO survey returned 48 responses. Of those responses, 79% indicated they provide public education to daycares, 83% to senior citizens, and 100% to elementary schools K-5. The programs that were commonly used by these departments were: NFPA – Risk Watch and Learn Not to Burn; Rainbow Valley; Home Safety Council; Idea bank; and the State of Michigan’s Safe at Home Program for grades one thru five. In addition to these programs, some responses indicated they developed their own programs.

Based on the feedback from the two surveys, 100% of the departments were targeting their programs to the high risk group of young children in kindergarten through fifth grade. In the research, the author examined NFPA (1991) *Learn Not to Burn Program*. This was one of the most common referenced programs in the results of the survey. The program offers a series of resource books for pre-school through elementary school.

Presentation methods included in both surveys were fire safety clowns, puppets, interactive games, hands on demonstrations, lecture with visual aids, fire safety house, and general presentation with props. In this research, both the types of programs being used by the fire service and the methods used to effectively present these programs to the target audience were examined.

The second research question asked, what are the challenges fire departments comparable to OFD experience in the delivery of public education programs?

Sample Survey Results of Comparable Departments:

What challenges does your department currently experience in the delivery of public education programs?		
Answer Options	Response Percent	Response Count
Scheduling with the schools	33.3%	3
Support from the firefighters	33.3%	3
Lack of funding for equipment/programs	77.8%	7
Insufficient staffing	55.6%	5
Other (please specify)		3
<i>answered question</i>		9
<i>skipped question</i>		1

Survey Results from NSEFO:

What challenges does your department currently experience in the delivery of public education programs?		
Answer Options	Response Percent	Response Count
Scheduling with the schools	55.8%	24
Support from the firefighters	27.9%	12
Lack of funding for equipment/programs	69.8%	30
Insufficient staffing	58.1%	25
Other challenges you may have experienced:		11
<i>answered question</i>		43
<i>skipped question</i>		5

The data from both surveys clearly indicated, with the highest combined average of 73.8%, that lack of funding for equipment and programs was the biggest challenge. The second highest, at 56.9% identified insufficient staffing as a major challenge. The raw data collected from other challenges expressed were:

- Budget cuts and lack of staffing
- Difficulties of trying to work into the schools busy schedule to present fire safety education programs

- Having to turn down program requests from the community because the requests exceed the capabilities of the public education division or department.

In addition to the challenges of presenting programs, the following two questions were also addressed in the survey:

- Who is responsible for presenting the programs? The results from both surveys showed 78.3% agreed that the career firefighters were responsible followed by the public educator with 54.8%. Other comments collected were:
 - Public education is normally written into everyone's job description especially the full time firefighters
 - Some departments use citizen fire academy and fire corps volunteers
 - It's the fire inspector's responsibility
 - Civilian staff are utilized
- Does your department provide special training for your public education team? The results of this question to comparable departments indicated 30% said yes and 70% said no to training. On the broader national response from the NSEFO, 47 out of the 48 responded to this question resulting in 63.8% said yes, and 36.2% said no to providing special training. Other comments collected were:
 - Send staff to a state public educator training seminar
 - Department provides in house training program
 - National Fire Academy classes
 - IFSTA training for formal education
 - NFPA 1035 class
 - 40 hour class is required for new recruits

The results from research question two identified many challenges facing fire and life safety educators. Budget cuts and the reduction of staffing are affecting both the delivery capabilities of the fire service as well as the training required to effectively deliver these programs. Byrne (2010) feels the fire service will need to adapt and reinvent itself to support the future needs of their customers. Fire prevention and education programs will be an important part of this change and must be supported by the leadership of the fire department. Byrne believes this change is what the customer wants and will add community value to the fire service. Crawford (2010) recognizes the public educator's energy and leadership qualities as an important part of the future of the fire service. Perhaps as the fire service "reinvents" itself to meet the future demands of our customers, the leadership and community will recognize the value and support funding to continue public education programs.

The third research question asked, what local or national programs exist to measure the effectiveness of public education programs? The results from both surveys indicate that 22% of the departments surveyed felt they have a system to measure the effectiveness of their programs and 78% do not. The following is data collected from the survey instruments:

- All classes receive a pre-test and a post-test; they also utilize scenario based evaluation to see if the participant would apply the appropriate measures.
- Statistics are tracked in Firehouse software to watch for trends and results from programs.
- Evaluation and feedback forms are given to the teachers for their input on the program.
- Evaluations are given to the school or organization for feedback.
- One department said they compare the numbers that are in the National Fire Incident Reporting System (NFIRS) five year report.

The author felt it was important to the research of this ARP to include a question in the survey on tracking the number of citizens the department educates annually. This question indicated that 70.5% did track these numbers and 29.5% stated they did not. The following data was collected from the survey:

- Some departments indicated they only document the number of contacts made through educational programs while others had a more detailed process.
- Events are tracked by who, what, when, where, and why.
- The data collected is used in a monthly and annual report.
- Data is entered into Firehouse software where they can track the number of adults and children that attended the program.
- Data is collected on all age groups.

The results indicated fire services across the country do not have a standardized system to measure the effectiveness of their public education programs. From the surveys returned, there was some consistency with utilizing a program such as Firehouse to collect and analyze data. This type of program can help identify an increase or decrease in incidents or trends within a community. Other departments implement a process with pre and post testing to measure the effectiveness of their programs. Evaluation and feedback instruments were also identified by the participants in the survey.

The final question of the survey asked, do you have a system to evaluate the reduction of incidents as a result of your public education efforts? The results of this question in the two surveys indicated that 23% of the departments surveyed felt they had a system to evaluate the reduction of incidents as a result of their public education efforts. Results indicated that 77% of the departments surveyed felt they did not have an effective system to evaluate their public education programs. The following data was collected from the survey:

- A response grid is prepared on GIS and we deploy resources into the heavily impacted area with an evaluation annually.
- We track incident statistics to see if programs are causing a reduction in the incidents.
- Firehouse software; for example allows us to see a reduction in juvenile fire setters since we implemented a program.
- Rely on overall numbers from the year within the city to include fire related deaths, number of fires, number of juvenile initiated fires, State statistics and NFPA statistics.

The fourth research question for this ARP asked, what are the essential components to effectively evaluate public education programs for OFD?

The research for this ARP identified pre and post-testing as two vital components of any public education program. According to USFA (1991) pre and post-testing is an effective way to measure the knowledge gained and success of a program. This component can be distributed to the teachers before the presentation and again after to measure the knowledge gained as a result of the program. The management team should include post-testing from a month to even a year or more after the delivery of a program to measure if the knowledge is being retained.

McClintock, Thompson (2000) identifies four stages of evaluation: formative, process, impact, and outcome. Each stage plays an important role in the process of developing a risk reduction program from the early stages, through the actual presentation and even months after that. An evaluation process will provide the program manager with data to analyze and identify if the program met its intended goals.

The author discovered in the research that some departments write their own programs, while others purchase commercially produced programs that target a specific age group. During the research the author examined the 1991 edition of NFPA's Learn Not to Burn Program and discovered that this product includes an evaluation tool as part of the program. This provides the

educator with an evaluation instrument and a knowledge test that has been developed specifically for the target audience.

Another critical component discovered in the research is to implement a system to collect the data produced from the results of the pre-testing and post-testing. This information is important to identify if a program is meeting its goals. Fire departments should already be entering data on the types of responses so they can generate reports that will identify an increase / decrease of a particular type of incident. Reports generated can also be vital during budget time to show the chief or supervisor the impact a particular program had on risk reduction in the community.

USFA (1991) recommends documenting and displaying anecdotes (brief stories) that come into the fire department on the impact a particular public education program had on a family in the community. This type of information can be used publically to show the value of a particular public education program and is also an important component of the entire process of evaluating public education programs.

Discussion

The purpose of this research was to identify methods to evaluate the effectiveness of presenting public education programs to the citizens of Onalaska. The research for this ARP clearly identified the importance and value of having a process to evaluate all risk reduction programs presented by OFD. According to NFPA (2009), 1,451,500 fires were responded to in 2008. These fires resulted in 16,705 injuries and 3,320 fire deaths. Residential home fires caused 83 percent of the fire deaths. These high statistics can be reduced by implementing effective risk reduction programs that target a specific type of incident or trend in our country and community.

As Byrne (2010) stated, the fire service is changing and there is a high value in the community for risk reduction programs. This article sends a strong message to the fire service that we need to reinvent ourselves through prevention and education in order to prevent from

becoming extinct. All departments in a municipality are fighting for every dollar as budgets and staffing continue to be cut. It is critical for a small progressive department like OFD, to reinvent itself and develop a strategic plan to effectively present risk reduction programs, to protect not only the citizens, but our firefighters as well.

Dominos Pizza (2009) is a great example of an organization that had to reinvent itself. By using a feedback instrument, Dominos was able to recognize that the customer was demanding a change. After extensive research over an 18 month period, they were ready to launch a new product to their customers. The author recognizes a correlation between Dominos and OFD. Without a system to evaluate our product (fire safety programs), OFD has no way of measuring if knowledge is being gained and behaviors changed as a result of our efforts.

NFPA 1035 is the recognized standard on the professional qualifications of a fire and life safety educator. This is a comprehensive standard that lists specific JPRs based on education and knowledge that is required of a professional safety educator. Specific sections identify knowledge in planning and development of programs, presenting appropriate materials using proper presentation methods for the target audience, and implementing an effective evaluation tool to measure the outcomes of the program. Although the research identified a small percentage of departments that require training; public educators should receive some type of formal education that follows or incorporates the JPRs for professional development listed in NFPA 1035.

The author reviewed the USFA (1991) Short Guide to Evaluating Local Public Education Programs. This document outlines the importance of evaluating public fire education programs. Reaching and motivating the target audience to practice fire prevention is the primary goal of this evaluation process. From both financial and loss prevention aspect it is important to know if a program reduced fires deaths, injuries, and or dollar loss. Public education programs are

measured by their change in behavior. Measuring knowledge by pre-testing and post-testing is an effective way to know if a program is successful.

McClintock, Thompson (2000) co authored *Demonstrating Your Programs Worth* to show program managers how they can demonstrate the value of their work to the public, peers, funding agencies, and the people they serve. Evaluation is the key to demonstrating the success or failure of any program. The document describes four stages of evaluation: Formative, Process, Impact, and Outcome. The final stage, which is outcome, is probably the most important. It measures if your program meets the goals of reducing death, injury, or property loss.

Qualitative and Quantitative are listed as the two methods of evaluation (McClintock, Thompson, 2000). Personal interviews, focus groups, and participant observations are the methods commonly used in qualitative. Knowledge from Qualitative methods allows program staff to make the recommended adjustments to a program to prevent problems once it has been implemented. Quantitative methods are used during process, impact, and outcome evaluation. This method involves analyzing data on number of participants in program and percentage of behavioral change. This is a key component to the success of any program as it focuses on collecting and analyzing data. This component of the whole evaluation process is very critical because it can provide the data needed to support additional staffing and funding for current or future programs. It also provides the development team statistics that paint a clear picture of the success or failure of a program. With limited funding and staffing being identified as the top two challenges in delivering fire safety education programs; the fire service can't afford to invest time and money into a program that does not produce the desired results.

Programs such as NFPA's *Learn Not to Burn* and *Risk Watch* can save the public educator a lot of time and money. These types of programs have already been tested and provide an

evaluation tool for the educator. The USFA and other non-profit organizations are also a great source to review programs that target a specific community risk.

Every department should have some type of system to track data from programs and emergency response incidents. This program should have the ability to generate reports to show information on the number of participants that attended the programs, the results from pre and post-testing, and if in fact there has been a reduction in the incidents the program was designed to reduce.

In summary, the research and feedback instrument used for this project opened the authors eyes to what had been missing for the past 17 years. The evaluation process is essential for all community risk reduction programs. It provides the fire service with data and statistics to demonstrate and show the value we bring to our communities. It's almost like a three dimensional view of all the sides of the program. Instead of saying we presented 13 shows for 2,000 children during fire prevention week, through the evaluation process we can show data from pre and post-testing, and behavioral and knowledge changes because of our efforts. The ultimate goal is to show the outcome of a reduction in incidents as a result of a particular public education program.

Recommendations

Through the process of applied research the author was able to answer four research questions that address a problem within OFD's organization. The literature review and survey instrument provided the foundation to reinvent the way OFD provides fire safety education programs to its community. The following outlines the recommendations as a result of this ARP:

- The fire chief along with the POC public educator will receive a copy of the ARP to review and discuss with the author.

- The author recommends that OFD implement an evaluation process to include at a minimum pre-testing and post-testing of all public education programs.
- The author recommends researching programs published by NFPA, USFA, Home Safety Council, or others that have incorporated an evaluation component to be used within their program.
- Firehouse is the software program that OFD uses to track fire inspections, emergency responses, training, inventory, and public education activities. The author will task the information technician (IT) to research a process within Firehouse that will allow OFD to collect data and produce reports as a vital part of the evaluation and community risk reduction process.
- The public educator and firefighters that present fire and life safety education programs should be provided with some type of professional development training on a local or national level. This training should follow NFPA 1035 *Professional Qualifications for Fire and Life Safety Educators*, and a thorough understanding of the community risk groups is necessary to reduce incidents within OFD's community.
- OFD should develop a strategic plan for its public education efforts. This plan must look at local as well as national trends so OFD can research and implement efficient and effective programs. All new programs shall include an evaluation component that can be used to measure knowledge and behavioral changes to assure the program is meeting its goals.

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Appendix A

May 10, 2010

Dear Chief,

I am currently working on my second Applied Research Project (ARP) for the National Fire Academy's (NFA) *Executive Fire Officers Program (EFOP)*. This four year program requires the completion of an ARP that addresses a key issue or problem within our organization. Completion of this paper will enable me to offer recommendations to improve the safety of the citizens in our community.

After attending Executive Analysis of Community Risk Reduction (EACRR) at the NFA, I realized a problem within our organization. Like many departments we provide fire safety programs primarily focused on the high risk population of children and seniors. The problem is the Onalaska Fire Department (OFD) does not have a system to evaluate the reduction of incidents as a result of our public education efforts.

I would greatly appreciate if you or your public educator could take a few moments and complete the attached questionnaire. The answers are valuable to my research and will be used to identify the essential components to evaluate the effectiveness of our public education program.

After completion, please e-mail the questionnaire to tgudie@cityofonalaska.com . If you or your public educator would like a copy of the results, I have provided an area on the last page of the questionnaire for contact information.

If you have any questions or would like to contact me, I can be reached at 608-781-9546.

Sincerely,

A handwritten signature in black ink, appearing to read 'Troy Gudie', with a stylized, cursive script.

TROY GUDIE

Assistant Fire Chief

Appendix B

Evaluating the Effectiveness of Public Education Programs Questionnaire

1. What public education programs are currently being taught in your department pertaining to Community Risk Reduction? Please check the appropriate boxes:

- a) Daycares: ☐ Yes ☐ No. If yes please check all that apply:

- | | |
|--|---|
| <input type="checkbox"/> Matches & Lighter Safety | <input type="checkbox"/> Practice an Escape Plan |
| <input type="checkbox"/> Candle Safety | <input type="checkbox"/> Kitchen Safety |
| <input type="checkbox"/> Stop Drop & Roll | <input type="checkbox"/> Call 911 |
| <input type="checkbox"/> Smoke Detectors | <input type="checkbox"/> Firefighter Turnout Gear |
| <input type="checkbox"/> Exit Drills in the Home (EDITH) | <input type="checkbox"/> Safety (Smoke) House |

Other:

Do you write your own programs or purchase a commercially produced product?

If purchased, what is the name of the program i.e. (NFPA, Risk Watch)?

What resources or teaching methods do you find effective in presenting to this age group?

- b) Elementary School K-5: ☐ Yes ☐ No. If yes which of the following examples are included in your program:

- | | |
|--|--|
| <input type="checkbox"/> Matches & Lighter Safety | <input type="checkbox"/> Practice an Escape Plan |
| <input type="checkbox"/> Candle Safety | <input type="checkbox"/> Kitchen Safety |
| <input type="checkbox"/> Stop Drop & Roll | <input type="checkbox"/> Call 911 |
| <input type="checkbox"/> Smoke Detectors | <input type="checkbox"/> Firefighter Turnout Gear |
| <input type="checkbox"/> Exit Drills in the Home (EDITH) | <input type="checkbox"/> Safety (Smoke) House Other: |

Other:

Do you write your own programs or purchase a commercially produced product?

If purchased, what is the name of the program i.e. (NFPA, Risk Watch)?

What resources or teaching methods do you find effective in presenting to this age group?

c) Senior Citizens:

☐ Fall Prevention ☐ Fire Safety ☐ Kitchen Safety

Other:

Do you write your own programs or purchase a commercially produced product?

If purchased, what is the name of the program i.e. (NFPA, Risk Watch)?

What resources or teaching methods do you find effective in presenting to this age group?

d) Additional programs or events, i.e. (open house) :

2. What challenges does your department currently experience in the delivery of public education programs?

☐ Scheduling with the schools ☐ Lack of funding for equipment / programs

☐ Support from the firefighters ☐ Insufficient staffing

Other challenges you may have experienced:

3. On your department, who is responsible for presenting public education programs?

☐ Public Educator ☐ Career firefighters ☐ Volunteer firefighters ☐ other

Comments:

4. Does your department provide special training for your public education team? i.e. (State Public Education Conference) ☐ Yes ☐ No, Please explain:

5. Do you have a system for measuring the effectiveness of your programs? ☐ Yes ☐ No

a) If yes, does this system utilize pre-testing, post testing, or other ways of measuring the knowledge gained from your programs? Please explain :

b) Do you document the number of citizens you educate annually? ☐ Yes ☐ No

Please explain:

c) Do you have a system to evaluate the reduction of incidents as a result of your public education efforts? ☐ Yes ☐ No Please explain:

I appreciate you taking time out of your busy schedule to complete this questionnaire.

If you would like to receive a copy of the results, please provide your contact information below.

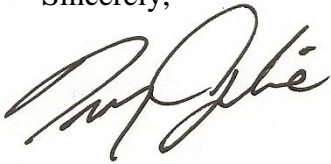
NAME:

ADDRESS:

PHONE NUMBER:

E-MAIL ADDRESS:

Sincerely,

A handwritten signature in black ink, appearing to read 'Troy Gudie', written in a cursive style.

TROY GUDIE

Assistant Fire Chief

Appendix C

Sample Survey List

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Appendix D

Raw Data from the Sample Surveys Distributed to Comparable Departments:

Question 1

What Public Education Programs are currently being taught in your department pertaining to community risk reduction?		
Answer Options	Response Percent	Response Count
Daycares	90.0%	9
Elementary school k-5	100.0%	10
Senior Citizens.	90.0%	9
<i>answered question</i>		10
<i>skipped question</i>		0

Question 2

Do you write your own programs or purchase a commercially produced product?

1	Daycare: our own
	Elementary: our own
	Seniors: our own
2	Daycare:
	Elementary: Purchase
	Seniors:
3	Daycare: We write our own programs, based on national data and other prepared programs
	Elementary: Same as above
	Seniors: create our own based on national data (FEMA) and NFPA program
4	Daycare: we write our own programs and mix in materials from other organizations (see below)
	Elementary: Same as above
	Seniors: mix of our own programs with that of NFPA
5	Daycare: Both
	Elementary: Both
	Seniors: Purchase
6	Daycare:
	Elementary:
	Seniors:
7	Daycare: Combination of both
	Elementary: Combination of both

	Seniors: Write our own programs
8	Daycare: Both
	Elementary School: Both
	Seniors: Both
9	Daycares: Both
	Elementary: Both
	Seniors:
10	Daycares: Both
	Elementary: Both
	Seniors: Own program

Question 3

Of the 3 categories, if purchased, what is the name of the program?

1	Daycare:
	Elementary:
	Seniors:
2	Daycare:
	Elementary: NFPA Risk Watch - For the third grade class that we target with the Risk Watch program a short lecture or classroom presentation seems to work the best. We do include homework for some of the presentations with an approximate 80% returning the homework with a majority of the kids having a fairly good retention of the presentation.
	Seniors:
3	Daycare: NFPA, Risk Watch, Home Safety Council Materials
	Elementary: Same as above, also include FEMA and UL materials.
	Seniors: NFPA Remembering When
4	Daycare: National Fire Safety Council, NFPA (Learn Not To Burn), USFA
	Elementary: Same as above
	Seniors: NFPA "customized" Remember When Program
5	Daycare: National Safety Council and Community Safety Net
	Elementary: National Safety Council and Community Safety Net
	Seniors: NFPA
6	Daycare:
	Elementary:
	Seniors:
7	Daycare: Book (Fireman's Safety Hints) Video (Matches and lighters are for grown-ups).
	Elementary: The smoke alarm show for 1st and 2nd graders, Get to Know EDITH for 3rd graders, How to Prevent Home Fires for 4th graders and Fires Fury for 5th graders.
	Seniors:

8	Daycare: NFPA, National Fire Safety Council (Fire Pup Program), The Idea Bank Training Resources
	Elementary School: Same as above
	Seniors: Same as above
9	Daycares: Rainbow Valley Fire Department series
	Elementary: Rainbow Valley Fire Department series
	Seniors:
10	Daycares: NFPA, Rainbow Valley
	Elementary: NFPA
	Seniors:

Question 4

Of the 3 categories, what resources or teaching methods do you find effective in presenting to each of the three age groups?

1	Daycare: Clown and puppet program
	Elementary: Clown and puppet program
	Seniors: Clown
2	Daycare:
	Elementary:
	Seniors:
3	Daycare: Play, backpack with materials and visuals, pictures (of real objects and firefighters), demonstrations, discussion, Q and A, one puppet in conjunction with the above
	Elementary: DVD, discussion, K-W-L, involving students in first aid role play, demonstration and visuals, engage teachers, have one student teach another
	Seniors: lecture combined with realistic activities, interaction with the paramedics and firefighters, games, Q and A
4	Daycare: Personal interaction and the use of props for visual learning
	Elementary: The age-appropriate use of props for visual learning, varying instruction methods: active participation, puppetry, clowns, a live person with a hand-puppet in a fire truck prop, and a human "puppet" on stage.
	Seniors: participation, providing on-site programs with token give-aways
5	Daycare: Structured per age group.
	Elementary: Structured per age group
	Seniors:
6	Daycare:
	Elementary:
	Seniors:
7	Daycare: Video's, read books, hands on, tours and short lectures with Q&A.
	Elementary: Video's, hands on with turnout gear and SCBA, tours and short lectures with Q&A.
	Seniors: Lecture with Q&A

8	Daycare: Hands on training and video based
	Elementary School: Same as above
	Seniors: Same as above
9	Daycares: Keep it short and don't get too detailed
	Elementary: Keep it to about an hour, get a little more detailed than with preschool kids
	Seniors: I don't do a lot with seniors. I have talked some about fire safety and the history of fire fighting.
10	Daycares: Small groups, hands on - some DVDs/videos
	Elementary: Hands on, class participation
	Seniors: Discussion with group

Question 5

What challenges does your department currently experience in the delivery of public education programs?		
Answer Options	Response Percent	Response Count
Scheduling with the schools	33.3%	3
Support from the firefighters	33.3%	3
Lack of funding for equipment/programs	77.8%	7
Insufficient staffing	55.6%	5
Other (please specify)		3
<i>answered question</i>		9
<i>skipped question</i>		1

1	Potential budget cuts, including not replacing personnel who work with the public education department. Some firefighters are not comfortable with teaching programs.
2	Staffing issues are a continuing struggle balancing public education activities with all other duties and responsibilities, liability issues
3	Keeping the Open House event fresh with new activities, and displays. Also, the weather and staffing.

Question 6

On your department, who is responsible for presenting public education programs?		
Answer Options	Response Percent	Response Count
Public educator	50.0%	5
Career firefighters	80.0%	8
Volunteer firefighters	20.0%	2
other	10.0%	1
Other (please specify)		4
<i>answered question</i>		10
<i>skipped question</i>		0

1	We have one full-time public education officer who also acts as the PIO; conducts a community risk analysis; develops the programs; teaches in the schools, businesses and community; conducts high-rise and school evacuation drills; and evaluates and reports on the programs.
2	Due to the size of the department, anyone can be assigned Public Education duties.
3	Being a paid on call department it is mainly the chief (the only full time member) that does most of public education at least the lead. If there are firefighters free at the time I have been able to get them to come along.
4	Most of the work is done by the Fire Inspector. The Chief does some too. If it can't be done by just one person, there are a few Paid-On-Call Firefighters that will come in and help

Question 7

Does your department provide special training for your public education team?		
Answer Options	Response Percent	Response Count
Yes	30.0%	3
No	70.0%	7
Other (please specify)		6
<i>answered question</i>		10
<i>skipped question</i>		0

1	Illinois has provided an annual state public education conference for the past 34 years. Attendance was down this year and last due to department budget cuts, but we still had many new members attending. In our department we piggy back short public education training sessions onto some of our training sessions for all department members. We are looking at adding this to some of our MABAS training sessions.
2	Attend State Public Education Conference on a limited basis (due to budgetary constraints)
3	We train our own Firefighters with our expectations and our specific programming.
4	At this there is not an education team on
5	Any Firefighter that comes in to help is given a quick "here's what I want you to do" just prior to the activity.
6	Teach within house

Question 8

Do you have a system for measuring the effectiveness of your programs?		
Answer Options	Response Percent	Response Count
Yes	10.0%	1
No	90.0%	9
If yes, does this system utilize pre-testing, post testing, or other ways to measure ways of measuring the knowledge gained from your programs?		1
<i>answered question</i>		10
<i>skipped question</i>		0

1	All classes receive a pre-and post test. We also perform an item analysis on the questions each year. We have started recording and awarding stories and testimonials (we just held our first "Kids are Heroes" night at the village council meeting). For many programs we use surveys before the participants leave; for our Middle School Program, we use a scenario based evaluation to see if they would apply the appropriate measures; and we are now keeping better track of the volume and types of calls through Firehouse statistics to watch for trends and results of programs
---	---

Question 9

Do you document the number of citizens you educate annually?
--

Answer Options	Response Percent	Response Count
Yes	60.0%	6
No	40.0%	4
Other (please specify)		7
<i>answered question</i>		10
<i>skipped question</i>		0

1	All classes receive a pre-and post test. We also perform an item analysis on the questions each year. We have started recording and awarding stories and testimonials (we just held our first "Kids are Heroes" night at the village council meeting). For many programs we use surveys before the participants leave; for our Middle School Program, we use a scenario based evaluation to see if they would apply the appropriate measures; and we are now keeping better track of the volume and types of calls through Firehouse statistics to watch for trends and results of programs
2	We currently only document the personnel involved not the number of people we reach
3	We track the number of students, attendees and participants at each presentation or drill.
4	We document the type of training and the number in attendance as well as staff hours attributed to the presentation. The results are listed on our monthly and annual report.
5	We document the school, amount of students, if we go to the school or if the class comes to the FD, the date and the program used
6	A record is kept of each event with a who, what, where, when...
7	Record on paper and in Firehouse on a monthly basis the pub ed programs presented and number of adults / children

Question 10

Do you have a system to evaluate the reduction of incidents as a result of your public education efforts?		
Answer Options	Response Percent	Response Count
Yes	20.0%	2
No	80.0%	8
Other (please specify)		2
<i>answered question</i>		10
<i>skipped question</i>		0

1	Through Firehouse software.
2	Please see above. This is fairly new since we are better able to track our data now.

Appendix E

Evaluating Public Education Programs

1. Default Section

1. Please check the box that best describes your department.

- ☐ Career (All Fulltime)
- ☐ Combination (Fulltime and Paid on Call)
- ☐ Volunteer (All Paid on Call/Volunteers)

2. What public education programs are currently being taught in your department pertaining to community risk reduction? Please check the appropriate boxes:

	Matches and Lighters	Stop Drop and Roll	Candle Safety	Smoke Detectors	Exit Drills In The Home (EDITH)	Call 911	Firefighter Turnout Gear	Fire Safety House	Kitchen Safety	Fall Prevention
Daycare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elementary K-5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Senior Citizen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

3. Do you write your own programs or purchase a commercially produced product i.e. (NFPA's Risk Watch)? Please Explain:

4. What resources or teaching methods do you find most effective in presenting to the different age groups i.e. (Puppet show for K-2)? Please Explain:

Evaluating Public Education Programs

5. What challenges does your department currently experience in the delivery of public education programs?

- ☐ Scheduling with the schools
- ☐ Support from the firefighters
- ☐ Lack of funding for equipment/programs
- ☐ Insufficient staffing

Other challenges you may have experienced:

6. In your department, who is responsible for presenting public education programs?

- ☐ Public Educator
- ☐ Career Firefighters
- ☐ Volunteer Firefighters

Other (please specify)

7. Does your department provide special training for your public education team? i.e. (State or other Public Education Conference)

- ☐ Yes
- ☐ No

Please explain:

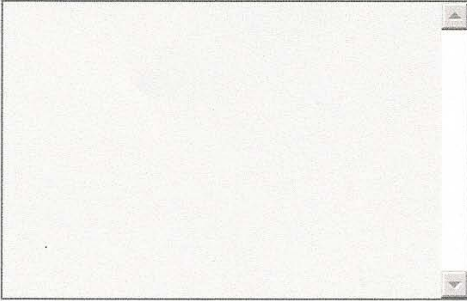
Evaluating Public Education Programs

8. Do you have a system for measuring the effectiveness of your programs?

☐ Yes

☐ No

If yes, does this system utilize pre-testing, post testing, or other ways of measuring the knowledge gained from your programs? Please explain:

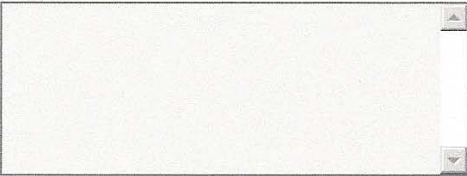
A rectangular text area with a light gray background and a thin black border. It contains a vertical scrollbar on the right side, indicating it is a scrollable field for text input.

9. Do you document the number of citizens you educate annually?

☐ Yes

☐ No

Please explain:

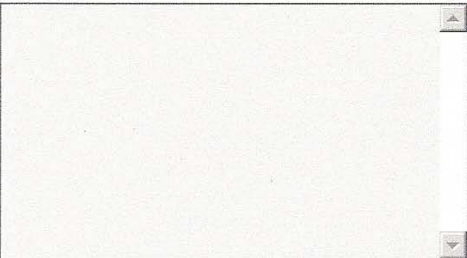
A rectangular text area with a light gray background and a thin black border. It contains a vertical scrollbar on the right side, indicating it is a scrollable field for text input.

10. Do you have a system to evaluate the reduction of incidents as a result of your public education efforts?

☐ Yes

☐ No

Please explain:

A rectangular text area with a light gray background and a thin black border. It contains a vertical scrollbar on the right side, indicating it is a scrollable field for text input.

Appendix F

Results with Raw Data from the Survey Instrument Distributed to NSEFO:

Question 1

Please check the box that best describes your department.		
Answer Options	Response Percent	Response Count
Career (All Fulltime)	62.5%	30
Combination (Fulltime and Paid on Call)	37.5%	18
Volunteer (All Paid on Call/Volunteers)	0.0%	0
<i>answered question</i>		48
<i>skipped question</i>		0

Question 2

What public education programs are currently being taught in your department pertaining to community risk reduction? Please check the appropriate boxes:											
Answer Options	Matches and Lighters	SDR	Candle Safety	Smoke Detectors	EDITH	call 911	FF Gear	Fire Safety House	Kitchen Safety	Fall Prev.	Response Count
Daycare	29	36	14	29	26	32	32	16	11	3	38
Elementary K-5	42	47	27	45	46	45	42	34	23	3	48
Senior Citizen	7	12	28	36	25	22	3	7	32	34	40
Other (please specify)											11
<i>answered question</i>											48

1.	Community forums. Community Emergency Response (CERT) Training, Get Ready (2 hour awareness program on threat.) Ready, Set, Go (WUI awareness)
2.	For any group we have a Fire Safety (robot) Dog that does "on the spot" questions re: fire safety We also do wellness activities for the seniors - i.e. blood pressure checks and some other minor items
3.	Drowning Prevention, Helmet Safety, car seat installations, juvenile firesetter interventions,

4.	We have the "hazard house" fire hazard simulator we use in schools and for adult education.
5.	Seniors - home safety inspections. Child proofing your home. Water safety.
6.	Fire Extinguisher Use, First Aid, & CPR
7.	Juvenile Fire Setter Intervention Course for kids less than 18 years old. Workplace fire safety, Car Seat Safety, Bicycle/Pedestrian Safety Drowning Prevention, Fire extinguisher use
8.	Electrical Hazards
9.	Business safety briefings- any requested fire and life safety subject plus portable fire extinguishers, alarm systems and fire warden training. CPR for Family & Friends, annual Citizens Fire Academy and monthly print media and municipal channel PSA's
10.	The programs are not separate--depending on the age group, 2-3 messages are focused in each presentation. Most common in younger kids are FF Turnout Gear, Smoke detectors and EDITH.
11.	Snap & Strap / Helmet Safety, Car Seat Safety (Inspection / Installation) Puppet Show

Question 3

Do you write your own programs or purchase a commercially produced product i.e. (NFPA's Risk Watch)? Please Explain:	
Answer Options	Response Count
	47
<i>answered question</i>	47
<i>skipped question</i>	1

1. NFPA materials

2. Both
3. Most of our programs are compiled from several different resources. We use commercial products for the Juvenile Fire Setter program, and our own programs for specific audiences.
4. NFPA Risk Watch with some adlibs
5. I use a Fire Safety Cube - kind of like a Rubik's cube with fire safety messages...I use this for the 2nd grade curriculum. You can see then at Good News Gifts... http://www.goodnewsgifts.com/firecube.html
6. Our department uses both types of media for programs
7. Written within fire prevention. Fulltime staffing
8. We write our own to satisfy the needs of the community
9. Both - we tailor programs to meet the specific need of the group we are speaking to – but use "can" programs as a basis
10. We use both NFPA and our own
11. Write my own and collaborate with other fire departments.
12. We use some off the shelf products, "play safe be safe" and then we use "be cool about fire safety". Some off the shelf products are way to large for presentations in schools, as we generally have a 30 min window.
13. Usually canned programs from NFPA, NSC, NIHTSA Severe Storm/Hurricane/Tornados/Flood from NOAA and NHC
14. I write and produce our own programs for the different schools.
15. Both. Generally, classes and programs are developed by our PEO.
16. Purchase NFPA

17. All programs are written in house. Each program is custom tailored to the specific needs of the citizen requesting the program.

18. No we currently use pre-written programs from the USFA.

19. Our fire prevention member models the program after NFPA

20. We utilize the State of Michigan's safe at home program for 1-5 grades (modified to suit our dept & school district's needs) and we have utilized programs for daycare/senior citizens designed by the persons that present them.

21. We develop our own projects with the support local and National materials

22. Right now I'm only at educator 1 level so I use already made programs. Risk Watch, RVFD curriculum, and other programs that are interesting and up to date.

23. Purchase from NFPA

24. Risk Watch

25. Develop audience specific programs. We borrow from ideas from others.

26. Combination of both. We may take ideas and tailor them to our customers.

27. Combination of both. We utilize information from the NFPA and Home Safety Council. Most of the campaigns are free or through their website.

28. We use a combination. Idea Bank and NFPA video's reinforce the messages. We create occupancy specific training for businesses and retirement home staff training.

29. We develop our own programs based on nationally recognized sources.

30. Both, a combination of components from RW and LNTB for preschool and school, no formal implementation, but formally the Remembering When in conjunctions with the Board of Health as part of a grant.,

31. modified Risk Watch

32. Purchase programs
33. Both
34. We do both. We have used many commercially produced products, but we have also written many of our own.
35. Both. Past grant awards have provided us with packaged programs, but most of the time the presented material is blended between own program and preprinted material.
36. We use jeopardy game
37. Write our own
38. NFPA Risk watch Local Program
39. Combination of both
40. I do a little of both. It depends on what's out there, the quality of the product and how much it costs. I purchase educational resources from NFPA more than from any other source.
41. NFPA curriculum. We don't have anyone who has expressed interest in developing something new.
42. Commercial
43. Canned
44. We set our own curriculum
45. Primarily use NFPA but have also customized

Question 4

What resources or teaching methods do you find most effective in presenting to the different age groups i.e. (Puppet show for K-2)? Please Explain:

1. Interactive for kids with NFPA video
2. We try to incorporate several methods, i.e. hands on, visual aids, examples, situational for the older groups and some videos. No puppets.
3. We find the person who is most personable with the age group and they take lead. It is a CO decision
4. The cubes are very effective and engaging.
5. Safety House
6. hands on training matched with classroom learning
7. Hands on is the most popular and interactive
8. Hand outs and having an actual firefighter there when need for the presentation
9. Firefighters talking is probably the best - while the Safety Dog is effective - the fact that a dog is talking to the children is more entertaining and does take a little away from the message - which is why ask questions
10. Power Point to K-5 and Seniors We also use videos for Daycare and K-5 We use props for one of our K-5 programs called Tools or Toys
11. whole classroom instruction---bring the firefighters in and do a lesson on fire safety with them and the children
12. Pre k and K, we use the only NEA approved fire safety program- "play safe- Be"
13. Experimental programs that interact children with the message. The fire safety house is one great tool we use not only for escape but have a tornado simulator as well to assist

kids and adults in safe methods in case of a storm or tornadic activity. This holds true for hurricane preparations and shelter information as well.

14. Pre-school - Firefighter in uniform with props and songs.
Elementary - Puppets, characters and music.

15. A lot of interactive games are utilized by our PEO in delivering programs.

16. Coloring books and live demonstrations

17. Hands-on demonstration is the most effective teaching method.
Smoke trailer: K-5
Fire extinguisher trainer: adults
Firefighters dressing in turnout gear to reduce fear: K-5
Fire safety Jeopardy game: K-senior citizens
Story telling: K-3

18. Use of lecture with visual aids has been effective in our presentations.

19. Given budget constraints, our fp member is restricted to the schools, which is funded through the state under safe (student awareness of fire education). His instructional methods consist of lecture with hands involving fire gear.

20. We use a puppet for day care programs. The puppet replaced a dog that was trained to do stop/drop/roll and other fire safety "tricks". Both of these programs have been very successful because they get the kids attention. The dog was also useful for other groups such as seniors, special needs programs. Motivated presenters are the primary resource we have.

21. Each year we meet with team for each grade. During this meeting we discuss what our objectives are and how we want to present it. The team evaluates and suggests how the message can be delivered with the most impact to the student.

4th and 5th grade we teach what they are learning today. How math, science and history pertains to our jobs and we also use our Accelerant k-9 as part of the science part

22. Puppet shows are great, but I have been unable to do these due to no budget. I believe that you need to be animated for the younger children. They are very eager to perform stop, drop and roll. Having large color pictures with items that they can identify with really helps especially in identifying hazards.

23. We use a clown troupe.

24. Demonstrations coloring books

25. We use a lot of visuals and props and have a Sparky dog. Also use videos augmented by firefighters getting on their level. Also, have a fire safety house. We use anything we can get for free. (Insurance companies, NFPA literature, etc. and even make our own brochures.

26. We use the Fire Safety House (table top) for our K-3 and then use our Fire Safety Trailer for the older groups. We also take the Fire Safety House to other older groups.

27. Short lessons with single messages. Lessons only last 5 minutes. May have multiple stations. Looking to switch to Start Safe curriculum developed by Home Safety Council. Will pilot it within the next 30 days and launch this fall throughout all the schools and daycares.

28. Firefighters receive annual training to conduct station tours, home safety surveys/ smoke alarms installs and deliver appropriate messages to specific audiences at special events. They handle daycare and preschool requests. The public education office handles 3rd grade in October (NFPA curriculum) and 4th and 5th grade in April & May. (combination of Home safety Council and NFPA Risk Watch material) We do not utilize clowns, puppets or safety houses.

29. General Presentation with props
Fire Safety House
Stop, Drop, and Roll prop
Age-relative books

30. Videos and interactive games such as jeopardy. Show and tell, gear and apparatus.

31. We use clowns and puppets as well as engine companies.

32. Fire and Life Safety House (Smoke trailer) for school aged kids

33. Visuals for all age groups, short messages repeated within different methods, video, practical, and question and answer.
I like to get them talking about what they know about fire safety and take the presentation from there. For K, Possibly add a short story from BIC Play safe, Be Safe.

34. We use puppets and Clowns

35. Risks are identified and programs are tailored to suit the audience

36. Fire Safety house (all)

37. Clowns, puppets, skits, safety house and demonstrations by fire crews

38. I use visual resources whenever possible. When the opportunity presents itself, I try to continue the learning process by having some sort of take-home assignment for students to do (kids and adults) (when I think that they will really follow through with it and benefit from the exercise).

One of the things I do at the elementary school level is encourage the kids to write to me and ask a question about the topic that we just covered. I find that most times, they still have questions that they would like answered when it is time for me to leave. When they write to me, I write back and answer the question. Some teachers have had their entire classes write individual questions. My hope is that the teacher or student will read the questions and answers out loud for all of the students to benefit. This helps to extend the learning unit. Each child who writes to me receives some sort of goodie. It can be time-consuming to read and respond to all the letters, but I value being able to extend the learning opportunity. The teachers like it because the kids are writing.

39. Videos and safety talks geared to specific age groups.

40. Puppet Show, Fire Safety House, Pluggie

41. We mix it up

42. We use age-appropriate videos and lectures for kids, mostly lectures for adults

43. Hands on, Sparky and robots demos

Question 5

What challenges does your department currently experience in the delivery of public education programs?		
Answer Options	Response Percent	Response Count
Scheduling with the schools	55.8%	24
Support from the firefighters	27.9%	12
Lack of funding for equipment/programs	69.8%	30
Insufficient staffing	58.1%	25
Other challenges you may have experienced:		11
<i>answered question</i>		43
<i>skipped question</i>		5

- Coordinating with the schools is tough. Then using OD personnel and having them get called away.
- Our Fire Chief is very pro education, so we are fortunate to have the support we need from him. Some times I will run into a scheduling conflict with one of the schools in our district, other than that, we have very good reception from our schools and community.
- Getting into the schools - the schools are very protective of their time
- We are completely blessed here and don't have any problems in the area's you are referring.
- Programs request exceed the capability of our Public Education Specialist in the Fire Prevention Division.
- The staff is willing to participate, as it involves overtime. they provide a very personable approach and all interact well with the students and teachers
- I learned through a seminar that before we can make it fun for the kids we have to make it fun for the firefighter. My biggest challenge is the school schedule. Days off half days and so on.

- Lack of support from supervisor. Lots of programs have been cut due to supervisor not thinking that they are important.
- Fire Marshal's Office coordinates and we use everyone (firefighters) we have to use in service engine companies so if we have a call the class gets interrupted.
- Many requests for the Fire Safety House are denied due to low staffing.
- Budget cutting, Public education gets cut first

Question 6

In your department, who is responsible for presenting public education programs?		
Answer Options	Response Percent	Response Count
Public Educator	59.6%	28
Career Firefighters	76.6%	36
Volunteer Firefighters	21.3%	10
Other (please specify)		14
<i>answered question</i>		47
<i>skipped question</i>		1

- We have 10 active volunteers who participate in such program during their ride-along times.
- Depends on the audience. If we have a staff who is specialized in a certain topic, they will teach. The volunteers help with the station tours and the paid staff will present to the schools and adults. We only have one public educator (myself) so we share the presentations. I am fortunate in that aspect as well, most of the staff are more than willing to help in any way.
- But that position is on paper only as it has only been filled once
- Fire Corps personnel
- We use Firefighters, Fire Prevention staff and our Volunteers each group has programs that they provide to the public

○ Assistance from Fire Marshal and other chief officers who may be a part of the curriculum
○ one career member
○ Public education is part of everyone's job description
○ Our public educators are the main source of public education. Our firefighters also take part in the education arena in performing demonstrations at various events, schools, groups etc.
○ We utilize our Citizens Fire Academy Alumni Association volunteers at select events like safety displays and city town hall meetings etc.
○ I am the full time PE, but many apparatus displays turn into a short PE program.
○ Fire Prevention division with the support of fire suppression crews
○ Civilian Staff Part Time Firefighters
○ Dep. Fire Marshals

Question 7

Does you department provide special training for your public education team? i.e. (State or other Public Education Conference)		
Answer Options	Response Percent	Response Count
Yes	63.8%	30
No	36.2%	17
Please explain:		27
<i>answered question</i>		47
<i>skipped question</i>		1

○ Our state has a PES program, we have only one on our department certified, although we have several who attend the conferences and who are involved in the ordering of supplies

and presenting material.
○ In house
○ They all attend yearly training sessions on various topics
○ Some - but limited!
○ Training is on a volunteer basis not required
○ NFA training and training via International Association of Fire Chiefs Public Education Section
○ NFA, regional Pub Ed meetings as part of the Florida Fire Chiefs Association (FFCA) and Florida Fire Marshals and Inspectors Association Public Educators section. Also FFCA executive development conference each July employs all sections to present curriculum for the 4 day event.
○ Annual conference, in house training.
○ We offer the opportunity to attend NFA and applicable outreach programs. Locally and statewide the public educators' organization provides training opportunity. Annually, the PEO has an in-service with crews to discuss program delivery techniques and get their perspective of needs.
○ Training through the Delaware State Fire School and the National Fire Academy.
○ Member attends annual safe program
○ We have been able to attend several conferences on public education over the years, but now due to financial limitations this will be limited.
○ We also conduct shift training for the line staff in regards to their role at the schools
○ But they have stopped my training, stating that there is no money in the budget for my program. I hope that they will reconsider. The public educator does need training in

programs and contact with other educator in order to compare and become a better educator.
○ Some. We have specific training with our fire safety house.
○ We send them to IFSTA and NFA for formal education. We also send them to various local education opportunities which are normally accredited by Federal or State officials.
○ We teach them about a couple of the regular programs.
○ NFPA conference when budget allows and NFA online and on campus (resident) training courses. Annual training for firefighters and a station reference guide for what subjects we discuss with the various age groups. Learn Not To Burn
○ Limited training
○ We have an Education Committee that assists in the planning and have had one FF drill that went over all our props
○ Internal training starting in the Academy and continued education for field personnel.
○ Our educators have taken the 1035 public educator course
○ No conference attendance, but support to attend NFA and state certification classes
○ State provided training and clown schools out of state.
○ We are able pursue training opportunities, both inside and outside the Department.
○ Puppeteer (sp?) Snap & Strap Car Seat Safety Conferences
○ 40 hour class required for all new recruits

Question 8

Do you have a system for measuring the effectiveness of your programs?		
Answer Options	Response Percent	Response Count
Yes	34.0%	16
No	66.0%	31
If yes, does this system utilize pre-testing, post testing, or other ways of measuring the knowledge gained from your programs? Please explain:		21
<i>answered question</i>		47
<i>skipped question</i>		1

○ Written evaluation form.
○ Post testing
○ This is an are we are starting to develop
○ Teacher evaluations--- Also with the fire safety trailer lesson with third grade we use pre and post tests.
○ We have done initial effectiveness testing. antidotal evidence is used also in evaluation
○ Public school feedback, using survey monkey as a part of the evaluation processes.
○ We do not pre test or post test.
○ This is the next development phase for your public education programming.
○ Through feedback forms
○ We have used written test before and we also assign public education projects to the kids to take home and do with the parents. We also look at year end reports to determine if we have run any calls on kids and what were the circumstances.
○ Pre-test and post test are good especially for stats for gathering data. But asking a few questions prior to the presentation is a good way to evaluate where the children are at in their fire safety education. Then summarizing what they learned and having them repeat

at least 5 major things that they learned in the class.
<ul style="list-style-type: none"> ○ Occasionally, we do a specific program with pre and post testing. (Class specific). We also do a pretest for our smoke alarm installation program. We also play up any anecdotal evidence of lessons learned.
<ul style="list-style-type: none"> ○ We are in the process of developing evaluation tools and data collection methods for each of the programs. We have developed the evaluation for the Elderly Adult Fire Safety and Fall Prevention Program
<ul style="list-style-type: none"> ○ We use intermittent pre and post surveys, class critiques and student short essay post presentation to evaluate for behavioral change with limited results. Teacher surveys were the least helpful post school presentation as they were preoccupied grading papers, etc.
<ul style="list-style-type: none"> ○ Depending upon the audience we use pre and post tests that happen immediately after the presentation. No mechanism in place for long term retention evaluation.
<ul style="list-style-type: none"> ○ evaluations from the school or organization
<ul style="list-style-type: none"> ○ We do not have a formal school program in place due to staffing. Once started, measures will be in place to gauge knowledge attainment.
<ul style="list-style-type: none"> ○ Pre and post testing...
<ul style="list-style-type: none"> ○ Pre and post testing or targeted groups assists in determining the effectiveness of our courses
<ul style="list-style-type: none"> ○ We can compare the numbers in NFIRS on the 5-year report
<ul style="list-style-type: none"> ○ pre/post testing

Question 9

Do you document the number of citizens you educate annually?		
Answer Options	Response Percent	Response Count
Yes	80.9%	38
No	19.1%	9
Please explain:		29
<i>answered question</i>		47
<i>skipped question</i>		1

- We have an access data form that tracks the event, the number of people who were they and break that down by adult/child. At then end of the year, as part of our prevention stats report we can say there was XXX number of contacts with XXX number of people from the community.
- We keep tract of the time spend, and personnel who attended at PR events through our internal tracking system, although we do not keep tract of the actual number of citizens.
- It shows up in our annual training report. So monthly we have to put the numbers into a data base
- We keep a database - I produce monthly and yearly reports.
- Fire Marshall Report in our Annual Report
- Data is collected on all age groups
- We try and get a "count" following the activity (for record keeping purposes)
- This began in 2010 and the count is by age group
- We try!
- documentation is kept and tabulated via computer
- Audience reached is tabulated on excel

- We capture the numbers of specific audiences and estimate the public contacts for public events.
- Every public education event is recorded on an electronic calendar including what type of program was offered, date, and how many participants.
- We document performance standards in the way of the number of programs delivered and the amount of people attending.
- We keep track of the numbers of children and adults, where we present the program, who presents it, and the type of program.
- I keep a spread sheet and have it broken into categories and than do a year end report as to how many people received training from the department.
- I keep a record of all the fire safety, fall & injury prevention, First Aid and CPR classes that I teach as well as the number of students.
- We document the number of programs; smoke alarms installed and estimate the number of people we think we have reached with a fire/life safety message.
- Our public educators keep a tally of the classes they instruct and how many individuals they have in each class and by age groups.
- Process evaluation - through roster or counts at programs.
- We collect data on each assignment and file hardcopies in a binder by fiscal year in each category: seniors, special events, fire extinguisher training, etc. We report these to the city each quarter and set annual projections at budget time each year. We evaluate a cost per participant against budget including salaries annually and make adjustments.
- As close as reasonable possible.
- through a database
- From every presentation that I attend, I document the number of attendees.
- Our state has a form for reporting

○ Every presentation is tracked in a spread sheet for the age of the attendees, number of attendees, the program presented, and the presenters.
○ We try to capture this information, but not everyone does it consistently.
○ We utilize a public education request form; one of the questions identifies the estimated number of participants. During the program we conduct a head count.
○ Data base

Question 10

Do you have a system for measuring the effectiveness of your programs?		
Answer Options	Response Percent	Response Count
Yes	35.6%	16
No	64.4%	29
If yes, does this system utilize pre-testing, post testing, or other ways of measuring the knowledge gained from your programs? Please explain:		21
<i>answered question</i>		45
<i>skipped question</i>		1

○ We are just starting one, but we do not have data yet to back it up.
○ This is done by the fire department epidemiologist and the department statistician,
○ We prepare a response grid on GIS and deploy resources in the heavily impacted areas and evaluate each fiscal
○ A future phase of benchmarking for our public education programming.
○ Annual review of NFIRS.
○ Basically the same way as mentioned above through call statistics. For example I can tell in the last 15 years we have not had a child burned or killed by fire and we see about 3000 kids a year.

- Firehouse is a good resource. I can see the number of Juvenile Firesetters have reduced since I've implemented the science of fire in my classes.
- We use the data from our run reports to determine if a youth was involved or if there is something that the older population needs to have more education on.
- Through our current data collection and fire incident reporting. We are still in the process of this evaluation across all public education programs.
- Measure reduction in residential fires that are accidental and reduction of preventable injuries.
- We rely on overall numbers from the year within the city to include fire related deaths, number of fires, number of juvenile initiated fires, State statistics and NFPA statistics.
- Annual run reports from Firehouse queried to specific age demographics
- We need one.
- We can tell by the numbers of automatic alarms -food on the stove-that come from our older housing. For a while after presentation, the numbers fall off, then they start a steady climb again until the next presentation.
- State fire incident reporting system